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May 3, 1995

R00013263
RCRA Records Center

Ms. Pat Reitz
U.S. Environmental Protection Agency
Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101

Re: EPA Contract No. 68-W4-0005; EPA Work Assignment No. R07011
SAIC Project No. 05-5029-07-2965-050
Period of Performance March 14, 1995 to September 30, 1995

Dear Pat:

SAIC is pleased to submit the enclosed Revised Draft RFA Report and Revised Draft RFA Conclusions and Recommendations for the McDonnell-Douglas Hazelwood Facility, in partial fulfillment of the requirements of the subject work assignment. These documents meet or exceed the requirements of the statement of work for this work assignment. They provide the results of the PR and VSI conducted by Metcalf and Eddy and presented in the Draft RFA Report (Attachment B to the Statement of Work), present the findings of the sampling visit conducted by SAIC, and include all modifications requested in the Draft RFA Comments (Attachment A to the SOW).

As a result of preparing these documents, SAIC identified a number of data gaps to resolve that are not within the scope of this work assignment. Most data gaps were identified after reviewing information collected to address the comments in Attachment A, and some were identified after reviewing the data from the sampling visit. The following are the data gaps identified by SAIC.

- Additional information is needed about wastes managed at units where tanks have been removed or replaced (i.e., SWMUs 1, 2 and 9). Specifically, what wastes have been contained in both the former and current tanks and have these waste streams ever been analyzed. This information may be available from the facility, and is necessary to evaluate contamination detected during closure investigations at those units.

- Clarification is needed as to whether the sludge holding tank (SWMU 3), which has been in operation since 1941, has always been configured as it is today (other than the installation of the HDPE liner). According to MCD officials, the IWTP

was purchased from Metropolitan St. Louis Sanitary District and modified to meet the wastewater pretreatment needs of the facility. During these modifications, this tank could have been modified, too.

- Additional information is needed on the current use of units that have been cleaned and closed, such as the former reactive cyanide and sulfide bearing waste storage unit (SWMU 6), the explosive waste storage unit (SWMU 7), and the former less-than-90-day storage area (SWMU 26). It would be useful to note what use, if any, the facility is making of them, particularly since some of the closure investigations were conducted years after the unit was taken out of service. Also, it would be useful to determine whether the current use or practices at the unit might pose a threat of a release to the environment.

- Additional information as to whether material used to fill excavations after tanks were removed, especially in the ramp area, was analyzed before being emplaced. The closure investigation reports do not indicate any sampling was conducted.

- Additional information on tank removal activities in the ramp area, such as whether obviously contaminated soil was removed, samples collected, etc. SAIC has requested this information from the facility, and representatives have said it will be provided, but it was not sent to SAIC before submittal of these documents.

- A determination of purity of PCE shipped to manufacturer from SWMU 17. Based on sampling results, there is acetone, xylenes, and 1,2-DCE in soil sample, as well as PCE. The presence of these contaminants suggest the recycled PCE may contain residues from the maskant, and may be a hazardous waste rather than pure product.

- A table listing background soil sample data from the St. Louis Airport Site (SLAPS), which adjoins the Hazelwood facility, was not provided in this report. SAIC is leading CERCLA RI/FS investigations at the SLAPS, and the investigators provided published information on the regional alluvial aquifer system beneath the site, and unpublished background soils data. SAIC used the background data in evaluating the soil sample data from the sampling visit and closure investigations, and cited the data in these documents. However, the actual background data can not be provided in this report until the Department of Energy provides approval to publish this information in advance of the report for the SLAPS. SAIC does not anticipate any problem with obtaining approval to publish the soil data, but the approval was not available before these reports were submitted.

- A list of waste-types managed at the permitted storage unit - Scrap Dock Shelter (SWMU 8). This information is critical, because contamination was detected in soil samples collected at this unit during the sampling visit. To evaluate whether contamination can be associated with this unit, a list of all wastes managed including analytical information, is needed, if available. Based on our telephone conversation yesterday, you may have much of the information we need.

SAIC does not believe that any of these data gaps have a direct impact on the conclusions and recommendations presented in this document. However, any additional information obtained could assist USEPA and MDNR in preparing the new RCRA permit for this facility, particularly in specifying corrective actions.

In reviewing the closure investigation reports, SAIC concluded that many of the units undergoing closure may require additional investigation before being approved closed by MDNR. SAIC recommends additional characterization of the subsurface soil and groundwater (in the alluvial aquifer) at these units as part of the RFI. The additional characterization is necessary because based on information from the closure investigations sources of contaminants could still remain in the subsurface, and the alluvial aquifer may have been impacted by releases from these units. SAIC's specific concerns and recommendations for further investigation under and RFI for each unit are as follows:

SWMUs 1 and 2, Sodium Hydroxide Waste Tanks, and Waste Nitric and Hydrofluoric Acid Solution Storage Tanks. The lead concentration in one sample from SWMU 1 exceeded both USEPA and MDNR action levels. Other metals were detected in samples from both units at concentrations above background levels. In addition, the soil samples collected were analyzed for a limited number of heavy metals, and not a complete scan. Very few soil samples were collected at each unit, and only to depths of 12 inches below land surface (BLS). Finally, the closure investigation report (investigation conducted concurrently at both units) did not indicate that any contaminated soil was excavated, despite the elevated concentrations of lead. Although metals are not particularly mobile in the subsurface, at SWMU 21, SAIC groundwater samples from 30 feet BLS contained metals. The extent of soil contamination at this unit should be determined, and an evaluation of regional groundwater is warranted.

SWMU 3, Wastewater Sludge Collection and Holding Tank. The soil sampling and tank inspection activities were very limited at this tank. The angled soil boring was not drilled directly beneath the tank because the contractor did not have the correct dimensions of the tank. Consequently, the samples were collected some distance from the tank. Despite the distance, metals and cyanide contamination was detected in the samples collected. The inspection of the exterior wall of the tank was limited to one discrete area of the tank exposed through a maintenance access, although previous

inspections had identified cracks in the tanks severe enough to warrant installing an HDPE liner. Also, no additional borings were drilled to collect samples from the soil near the tank to confirm that contamination had not seeped through any of the cracks before the liner was installed. Additional soil samples at this unit should be collected from directly below the tank, and along the circumference of the tank. Groundwater in the alluvial aquifer should be evaluated for a release.

SWMU 4, Leaked or Spilled Jet Aircraft Fuel Storage, Building 28 Waste Tank. The tank was replaced in 1989, but a closure investigation was not conducted until 1993. There is no information on whether soil in the excavation when the tank was removed was screened with a PID, or whether any obviously contaminated soil was excavated. Soil samples collected during the closure investigation were analyzed for BTEX and TPH, but not for complete VOC and SVOC scans. Contaminants were detected in soil samples from depths where groundwater is present. The extent of soil contamination at this unit should be determined as well as whether there has been a release of contaminants to regional groundwater.

SWMU 9, Waste Nitric and Hydrofluoric Acid Solution Storage Tanks. Although soil was excavated when the tanks were removed, post removal soil samples had concentrations of fluoride, lead, barium, and chromium, exceeding the background levels, and detectable concentrations of mercury. Samples were from depths where groundwater is present. Additional soil and groundwater sampling is recommended to determine the extent of contamination.

SWMU 11, Former Waste Oil Tank, Building 6. Soil samples were collected from only one borehole beneath the tank, and were analyzed only for TPH and BTEX. TPH and toluene were detected in samples from approximately 11 feet BLS, well below the perched groundwater system. No additional sampling has been conducted at this unit, and samples have not been analyzed for complete SVOC and VOC scans. Additional soil and groundwater sampling is recommended to determine the extent of contamination.

Ramp Area SWMUs (13-15). The perched groundwater system in this area has been substantially contaminated from leaking fuel. However, groundwater samples collected during biannual monitoring are analyzed only for TPH and BTEX, not complete SVOC and VOC scans. In addition, the closure investigation reports do not indicate that soils contaminated with fuels have been removed from this area. Finally, the alluvial aquifer system has not been investigated in this area. Considering the mobility of fuels in the subsurface and the possibility that heavily contaminated soils may still be present in the subsurface, this area probably has the highest potential to have released contamination to the alluvial aquifer of any areas at the facility. A determination of whether fuels contamination remains in the soil should be made, as well as monitoring of the alluvial aquifer.

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If you have any questions or comments on the documents, or issues raised in this transmittal letter, please contact me at (703) 917-7928.

Sincerely,
SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Kate Fox

Kate Fox
Work Assignment Manager

cc: Aaron Schmidt, MDNR (letter only)
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